UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

AUG 25 2014

OFFICE OF
COMPLIANCE AND ENFORCEMENT

Reply To: OCE-082

Ms. Kamaljit Khakh
Trustee, Kamaljit Khakh Wood Trust
1617 S. Stanley Lane
Spokane Valley, Washington 99212

Re: No Further Environmental Investigation or Cleanup Required Under Current Land Use
Plummer Quick Stop, 300 10th Street, Plummer, Idaho
EPA UST Facility ID No. 2100026 – Coeur d'Alene Indian Reservation

Dear Ms. Khakh:

The U.S. Environmental Protection Agency (EPA) has reviewed the July 9, 2014 report titled *Final Vapor Intrusion Characterization Report, Plummer Quick Stop, Plummer, Idaho*, prepared on your behalf by Schwyn Environmental Services, LLC (Schwyn) along with the request for closure of the above referenced site. Based on our review of this document, EPA has determined that no further environmental investigation or cleanup of petroleum releases from the underground storage tanks (USTs) located on the property is required under current land use. However, this letter serves as notification that petroleum contaminated soil (PCS) still remains in the subsurface beneath portions of the property. Should future land use activities include excavation and/or construction into these contaminated materials, additional cleanup or institutional controls will be necessary to limit direct human exposure to petroleum related contaminants. This determination is made in a manner consistent with the site evaluation and risk assessment procedures described in the Idaho Administrative Procedures Act (IDAPA) 58.01.24, *Standards and Procedures for Application of Risk Based Corrective Action at Petroleum Release Sites* (2009, revised 2012) and the Idaho Department of Environmental Quality's (IDEQ's) *Risk Evaluation Manual for Petroleum Releases* (Petro REM, August 2012). EPA uses the Petro REM as a guide for addressing UST petroleum releases in Indian Country in Idaho. In addition to the Petro REM, EPA reviewed the following documents which were prepared for the Plummer Quick Stop site in support of this determination:

1. *Final Vapor Intrusion Characterization Report, Plummer Quick Stop, Plummer, Idaho.* Prepared for Kamaljit Khakh Wood Trust by Schwyn Environmental Services, LLC. July 9, 2014.

2. *Work Plan for Vapor Intrusion Characterization, Plummer Quick Stop, Plummer, Idaho, EPA UST Facility No. 2100026-Coeur D'Alene Indian Reservation.* Prepared for Kamaljit Khakh Wood Trust by Schwyn Environmental Services, LLC. March 12, 2014.

3. *Preliminary Risk Evaluation Report, Plummer Quick Stop, Plummer, Idaho.* Prepared for Kamaljit Khakh Wood Trust by Schwyn Environmental Services, LLC. December 31, 2013.

4. *Site Characterization Summary Report, Plummer Quick Stop, Plummer, Idaho, EPA UST Facility No. 2100026-Coeur D'Alene Indian Reservation.* Prepared for the Kamaljit Khakh Wood Trust by Schwyn Environmental Services, LLC. November 18, 2013.

5. *Subsurface Investigation, Plummer Quick Stop, 300 10th Street, Plummer, Idaho, Farallon PN: 1177-001.* Prepared for the Kamaljit Khakh Wood Trust by Farallon Consulting, LLC. August 21, 2013.

6. *Scope of Work, Plummer Quick Stop, 300 10th Street, Plummer, Idaho, Farallon PN: 1177-001.* Prepared for the Kamaljit Khakh Wood Trust by Farallon Consulting, LLC. February 26, 2013.

7. *Status of Leaking Underground Storage Tank Site, Plummer Quick Stop, Plummer, Idaho, EPA UST Facility ID No. 2100026 – Coeur d'Alene Indian Reservation.* Letter from Peter Contreras, Manager, Ground Water Unit, EPA Region 10 to Ms. Kamaljit Khakh, Trustee, Kamaljit Khakh Wood Trust. January 2013.

8. *Phase II Site Investigation at Plummer Quick Stop, 300 10th St., Plummer Idaho.* Prepared for Paul Scott by Blue Mountain Environmental Consulting Services. November 19, 2008.

9. *Pre-Insurance Underwriting Investigation, Plummer Quick Stop, Hwy 95 and Hwy 5, Plummer Idaho.* Prepared for the Idaho Petroleum Storage Tank Fund by Brown and Caldwell. November 30, 2001.

10. *Vapor Trace® Shallow Soil Gas and Groundwater Investigation, Plummer Quick Stop, Plummer, Idaho.* Prepared for the Idaho Petroleum Storage Tank Fund by Tracer Research Corporation. February 21, 1995.

11. *Soil Contamination Assessment, Conoco, Plummer, Idaho.* Prepared for Gene Haeg by Howard Consultants, Inc. July 12, 1991.

Site Background and Summary

The site is an active gasoline retail station with one aboveground storage tank and three underground storage tanks (USTs). Two of the USTs have a capacity of 6,000-gallons and one has a capacity of 10,000-gallons. The EPA records indicate that all three USTs were installed in 1985 and are used to store gasoline, although one was previously used to store diesel. In 1986, an overfill occurred during a fuel delivery which resulted in an approximately 10 gallon release of gasoline. A second release was reported in 1991, when a car hit a pump island causing a pipe leak. This leak lasted approximately one week and several hundred gallons of fuel were released. Other unknown or unreported releases may have also contributed to the petroleum contamination at this site.

Limited site assessments were conducted at the property in 1991, 1995, 2001, 2008 and 2013. Boring logs indicate that unconsolidated soil composed of silt, poorly graded sand with gravel, well graded sand, and silty sand exist to a depth of 20 to 25.5 feet where a hard, dense, unfractured bedrock basalt was encountered. The assessments verify that petroleum contaminants above Idaho cleanup levels were present on the site property. The three primary areas of contamination were the fuel dispensing area (pump islands) next to 10th Street, the area containing the three USTs and the area containing the above

ground storage tank (AST). In June 1991, four test borings were advanced to 20 feet below ground surface (bgs) in the vicinity of the three USTs. Soil samples were collected at 5, 10, 15 and 20 foot depths in each boring and examined for petroleum odor and visual evidence of hydrocarbons. Eight soil samples were analyzed for total petroleum hydrocarbon levels which ranged from 11 to 722 mg/kg. Hydrocarbon identification analyses on two samples indicated contamination was from diesel fuel. Idaho does not currently have a cleanup level for total petroleum hydrocarbons, but in 1991 the applicable action level was 1,000 mg/kg. Groundwater was not encountered in any of the borings.

In February 1995, a shallow soil-gas and groundwater investigation was conducted for the Idaho Petroleum Storage Tank Fund (PSTF). A total of 14 soil-gas and 5 groundwater samples were collected from 12 locations; groundwater samples were collected if encountered during the soil-gas sampling. Twelve soil-gas samples were collected at shallow depths (2.5 to 4 feet bgs) and two were collected at 12 to 13 feet bgs. Two shallow groundwater samples (3 feet bgs) were collected next to the north dispenser and three samples (12 feet bgs) were collected in the UST area. The report concluded that volatile organic compounds were present in soil and groundwater. However, groundwater bearing zones were not continuous across the site indicating the presence of small, seasonally perched groundwater lenses beneath the site.

In November 2001, a subsurface investigation was conducted at the request of the PSTF as part of their pre-insurance site characterization activity. Ten Geoprobe® borings (i.e., B-1 through B-10) were advanced to varying depths throughout the site. Shallow soil samples (1-4 feet bgs) were collected in the vicinity of the AST and product piping and fuel dispensing facilities (i.e., B-1 and B-6 through B-10). Deep soil samples (14-16 feet bgs) were collected from borings B-2 through B-5 located around the USTs. A perched lense of groundwater was identified in boring B-7 at 4 feet bgs and sampled. Groundwater was not encountered in any of the other nine borings. In comparison to current Residential Use Screening Levels (RUSLs) listed in the Petro REM, laboratory results indicate that benzene concentration in soil samples from B-2, B-8 and B-9 exceeded the RUSL of 0.025 mg/kg. Benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) concentrations in B-10 (2-4 feet bgs) exceeded RUSLs of 0.025, 6.6, 0.25, 27 and 0.08 mg/kg, respectively. For the groundwater sample from boring B-7, benzene concentration exceeded the RUSL of 0.005 mg/l.

In November 2008, a limited Phase II site investigation was contracted by the acting agent of Kamaljit Khakh Wood Trust as part of the purchase of the property. Seven soil samples were collected from six different locations identified as B1, B2...B6. Sample depths were 12 feet bgs for all locations and also 4 feet bgs at location B3. Laboratory analysis of the soil samples indicated benzene and xylene concentrations in borings B2 and B5 were above Idaho's Initial Default Target Levels (IDTLs) of 0.0178 and 1.67 mg/kg, respectively. In comparison to current RUSLs, benzene, xylene and ethylbenzene concentrations in borings B2 and B5 exceeded applicable RUSLs. Groundwater was not encountered in any of the borings and therefore was not sampled. The report concluded that a previous petroleum release occurred at the site and further investigation was recommended to delineate the extent of contamination.

In March 2013, a subsurface investigation was performed in response to EPA's January 2013 letter requesting submittal of a work plan to investigate the extent of soil and groundwater contamination at the site. Seven soil borings (i.e., SB-1 through SB-7) were advanced to depths ranging from 15 to 22 feet bgs until probe denial occurred. Laboratory results included diesel-range organics (DRO), gasoline-range organics (GRO) and oil-range organics (ORO) to assess total petroleum hydrocarbon

concentrations, however there are no current IDTLs for these compounds. BTEX were reported at concentrations above RUSLs in SB-1, SB-2 and SB-3. The depth of contamination was not completely assessed because the borings were terminated due to contact with basalt bedrock. The report concluded that the data indicate the following: 1) a release of gasoline at or proximate to the north product dispenser (SB-2), 2) gasoline contamination at lower levels at or proximate to the south product dispenser and product-dispenser lines (SB-3) and 3) a release of diesel fuel near the existing USTs (SB-7). Groundwater, perched or otherwise, was not encountered and current data indicate that a consistent groundwater-bearing zone does not exist within the unconsolidated sediments above the basalt bedrock.

In October 2013, a subsurface investigation was conducted to determine the vertical extent of petroleum contaminated soil (PCS) in the vicinity of previous soil borings SB-2, SB-3, and SB-7, and if encountered, whether or not groundwater has been impacted. New borings designated SB-2D, SB-3D and SB-7D were drilled to depths of 22.5, 25 and 27.5 feet bgs, respectively. The report concluded that PCS is limited to soils above the basalt bedrock contact which based on field observations was found to be hard, dense and not fractured. Groundwater was not encountered during the investigation, and therefore was not considered an affected media or potential pathway for human exposure.

Risk Evaluation

Provided below is an outline of EPA's understanding of the facts regarding the risk evaluation (RE) at the Plummer Quick Stop site. Details are contained within the enclosed documents.

In December 2013, using the computational spreadsheets that accompany the Petro REM, a site specific RE was performed by Schwyn to evaluate the cumulative risks associated with petroleum contamination at the site and to determine if the site is eligible for closure or further actions are required. The purpose of the RE was to compare site specific levels of contamination with screening levels within the Petro REM. The RUSLs and IDTLs are the most conservative medium-specific levels, and meeting these levels allows for unrestricted (residential) use of the property. In addition, the development of a site conceptual model (SCM) or any land use restrictions are not required. The RE included three contaminant source areas: 1) north product dispenser area, 2) south product dispenser area and 3) UST area. Petroleum chemicals of interest (COIs) that were detected at concentrations exceeding the RUSLs included benzene, ethylbenzene, naphthalene, toluene, xylene and MTBE. Consequently, a SCM was developed which contains three key elements: 1) sources including contaminant sources areas and COIs; 2) pathways including fate and transport mechanisms, exposure pathways and routes of exposure and 3) receptors which include characteristics of land use and likely receptors. The RE identified subsurface soil and vapor as the media of concern as well as two complete exposure pathways. A complete exposure pathway involves a source of petroleum products, release and transport mechanisms, routes of exposure and potential receptors. In this case, the complete exposure pathways were limited to direct contact with subsurface soils by construction workers and indoor inhalation of soil vapor emission (vapor intrusion) by non-resident workers. Groundwater was not considered a medium of concern because it was not encountered during recent investigations and was previously found to occur in seasonally perched lenses. The RE also reviewed well logs for drinking water wells in the area which indicated the first encountered aquifer is deep in the underlying basalt bedrock and COIs did not extend below the basalt bedrock contact. In addition, field observations during the October 2013 investigation indicated that the basalt bedrock was hard, dense and not fractured thereby prohibiting downward migration of COI's.

The Petro REM states that for a site-specific risk evaluation, the acceptable cumulative risk for carcinogens is 1 x 10^{-5} and the acceptable hazard index for non-carcinogens is 1.0. Results from the RE indicate that for all three contaminant source areas, the exposure to subsurface soil via direct contact is within acceptable target risk and hazard index levels. For inhalation via vapor intrusion, the risk and hazard indexes are within acceptable levels for the south dispenser area and the UST area but exceed acceptable levels for the north dispenser area. Since soil vapor data from beneath the building was not available when the RE was developed in December 2013, the risk associated with indoor inhalation by non-resident workers was calculated using default exposure factors. These factors incorporate conservative assumptions including the location of the contaminant source directly below the building, no biodegradation of chemicals and theoretical equilibrium partitioning values to convert soil concentrations into vapor concentrations. In order to more realistically model this pathway, the Petro REM recommends several steps including the collection of soil vapor data. A request to collect additional site specific data (i.e., soil vapor directly beneath the building) and refine the RE was submitted and approved in March 2014. The results of the soil vapor characterization and an addendum to the RE were submitted in July 2014. Based on recommendations from IDEQ, BTEX vapor concentrations directly beneath the building were compared to modified RUSLs and EPA's November 2013 Regional Screening Level (RSL) Industrial Air Supporting Table. The RUSLs and RSLs were modified to reflect sub-slab sample results. The BTEX vapor concentrations were below the modified RUSLs and RSLs, therefore the exposure to subsurface soil via vapor intrusion is within acceptable target risk and hazard index levels.

Determination

After evaluating this risk-based approach, EPA has determined that no further environmental site assessment or cleanup is necessary at the Plummer Quick Stop property in order to protect human health or the environment under the current land use scenario. However, small volumes of contaminated subsurface soil remain adjacent to the building at 300 10th Street in Plummer, Idaho. Should this building be torn-down or the site excavated at some time in the future, it is likely that additional PCS will have to be removed.

This determination is made only with respect to the release of petroleum products identified in the reports mentioned above. This determination applies only to the areas of the site property at 300 10th Street (EPA Facility No. 2100026), which was affected by the release identified in the aforementioned. It does not apply to any other release or potential release at the property, or any other areas of the property.

EPA does not assume any liability for any release, or for any actions taken or omitted by any person or his or her agents or employees with regard to the release, threatened release, or other conditions at the site. However, in the event additional information becomes available, indicating the site may pose a hazard to human health or the environment (such as a change in future land use), EPA may require additional assessment and remediation activity.

Thank you for taking the necessary steps in completing this remedial action. If you have any questions or comments regarding this letter, please feel free to contact David Domingo of my staff at (206) 553-2456, or via email at domingo.david@epa.gov.

Sincerely,

Edward J. Kowalski
Director

Enclosures

cc w/o enc: Tiffany Allgood
Coeur d'Alene Tribe

Craig Schwyn
Schwyn Environmental Services LLC

cc w/enc: Kathleen Falconer
Idaho Department of Environmental Quality
Coeur d'Alene Regional Office

Donna Spier
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Jack Bringman
Mayor, City of Plummer